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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/677,738	UEDA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Clara Yang	2612	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on 10/03/2003.
2. ☒ The allowed claim(s) is/are 1-3.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input checked="" type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

**EXAMINER'S COMMENT and STATEMENT OF REASONS FOR ALLOWANCE**

***Drawings***

1. The drawings are objected. Per 37 CFR 1.83(a), conventional features illustrated in the drawing as rectangular boxes, such as those in Fig. 2, must be labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Allowable Subject Matter***

2. Claims 1-3 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest a vehicle remote control system comprising (1) a vehicle's first transmitter transmitting a request signal at a first frequency; (2) a portable device's transmitter transmitting an identification signal at a second frequency when

the portable device's first receiver receives the request signal at the first frequency; (3) the vehicle's second transmitter transmitting an interrogation signal at the second frequency when the vehicle's receiver receives and authenticates the identification signal; (4) the portable device's transmitter transmitting a response signal when the portable device's second receiver receives the interrogation signal at the second frequency; and (5) the vehicle's receiver receiving and authenticating the response signal, thereby permitting an operation of a device on the vehicle, wherein, when the vehicle's second transmitter or the portable device's second receiver breaks down, the vehicle's first transmitter transmits the interrogation signal at the first frequency, and the portable device's first receiver receives the interrogation signal. The examiner considers the first frequency and the second frequency to be different as called for in claim 3.

In an analogous art, Mindl et al. (US 6,714,119) teach a keyless access control device for motor vehicle. Mindl's Fig. 2 is a flow chart for access authorization between a vehicle transceiver unit and a portable transponder. As shown in the flow chart, Mindl teaches (1) the vehicle transceiver unit's low frequency (LF) transmitter (i.e., first transmitter) transmitting an LF code signal (i.e., a request signal), (2) the transponder's high frequency (HF) transmitter transmitting a coded HF response when the transponder's LF receiver (i.e., a first receiver) receiving the LF code signal, (3) the vehicle transceiver unit's HF transmitter (i.e., second transmitter) transmitting an HF key inquiry signal (i.e., an interrogation signal), (4) the transponder's HF transmitter transmitting an HF encrypted code signal (i.e., a response signal) when the transponder's HF receiver (i.e., second receiver) receives the HF key inquiry signal, and (5) the vehicle transceiver unit's HF receiver receiving and authenticating the HF encrypted code signal, thereby unlocking a vehicle door upon authorization. (See Col. 5, lines 9-56.)

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Mindl fails to teach the vehicle transceiver unit's HF transmitter or the portable device's HF receiver breaking down and causing the vehicle transceiver unit's LF transmitter to transmit the key inquiry signal and the portable device's LF receiver to receive the key inquiry signal.

In another analogous art, Stobbe et al. (US 6,538,560) teach a keyless access control device for motor vehicle. Stobbe's flow chart for access authorization between a vehicle transceiver unit and a portable transponder, as shown in Fig. 2, shows the steps of (1) the vehicle transceiver unit's low frequency (LF) transmitter (i.e., first transmitter) transmitting an LF code signal (i.e., a request signal), (2) the vehicle transceiver unit's HF transmitter (i.e., second transmitter) transmitting an HF key interrogation signal (i.e., an interrogation signal), (3) the transponder's HF transmitter transmitting an HF encrypted code signal (i.e., a response signal) when the transponder's HF receiver (i.e., second receiver) receives the HF key interrogation signal, and (4) the vehicle transceiver unit's HF receiver receiving and authenticating the HF encrypted code signal, thereby releasing a vehicle door upon authorization. (See Col. 6, lines 32-67 and Col. 7, lines 1-47.) Stobbe omits teaching (1) the transponder's HF transmitter transmitting an identification signal when the transponder's LF receiver receives the LF coded signal, (2) the vehicle transceiver unit's HF receiver receiving and authenticating the identification signal prior to transmitting the HF key interrogation signal, and (3) the vehicle transceiver unit's HF transmitter or the portable device's HF receiver breaking down and causing the vehicle transceiver unit's LF transmitter to transmit the key inquiry signal and the portable device's LF receiver to receive the key inquiry signal.

In another analogous art, Meier (US 6,323,566) teaches a vehicle remote keyless entry (RKE) system 10. As shown in Figs. 4 and 5, Meier's RKE system 10 includes remote transponder 15 and vehicle communication processor 11, wherein transponder 15 and

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communication processor both have an LF transceiver and an RF transceiver (see Col. 2, lines 25-33; Col. 4, lines 14-27; Col. 5, lines 41-46; and Col. 8, lines 3-11 and 42-53). When a user pushes a button located on communication processor 11, communication processor 11's RF transceiver 12 transmits a command (i.e., request) to transponder 15's RF transceiver 16 to prepare transponder 15's LF transceiver for interrogation (see Col. 6, lines 12-16 and Col. 8, lines 46-53). Communication processor 11's LF transceiver 13 then transmits an interrogation signal to transponder's LF transceiver 17 (see Col. 5, lines 12-15; Col. 7, lines 25-27; and Col. 8, lines 53-64). Upon receiving the interrogation signal, transponder 15's LF transceiver 17 and RF transceiver 16 transmit in parallel an LF response and an RF response (see Col. 7, lines 27-44 and 62-66; and Col. 11, lines 22-43). Thus in the event of RF interference or high noise levels, communication processor 11 is still able to receive transponder 15's response via communication processor 11's LF transceiver 13 (see Col. 2, lines 17-23; Col. 5, lines 7-12 and 21-26; Col. 7, lines 62-67; and Col. 8, lines 1-11). Meier, however, is silent on (1) transponder 15 transmitting an identification signal upon receiving communication processor 11's command, (2) communication processor 11 authenticating the identification signal prior to transmitting the interrogation signal, and (3) communication processor 11's RF transmitter or the portable device's RF receiver breaking down and causing communication processor 11's LF transceiver 13 to transmit the interrogation signal and the portable device's LF transceiver 17 to receive the interrogation signal.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on 9:00 AM - 7:30 PM, Monday - Thursday.

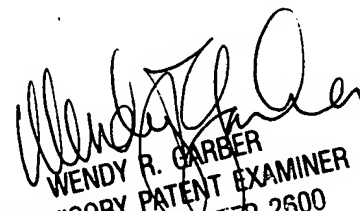
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Please note that Art Unit 2635 is now Art Unit 2612.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY

5 April 2006

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600